	Application No.	Applicant(s)
Office Action Summary	09/910,227	ROSS, MARK A.
	Examiner	Art Unit	
	Paul A Baker	2188	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>20 July 2001</u>.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-58* is/are pending in the application.
  4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-10 and 12-58* is/are rejected.
7)☒ Claim(s) *11* is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on <u>20 July 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.
  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  a)☐ All b)☐ Some * c)☐ None of:
    1.☐ Certified copies of the priority documents have been received.
    2.☐ Certified copies of the priority documents have been received in Application No. _____.
    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
  * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
  Paper No(s)/Mail Date <u>2</u>.
4)☐ Interview Summary (PTO-413)
  Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 7 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 7 recites masking the input value with the mask value to produce a masked input value, then applying a data protection function to the masked input value *and mask value*. Neither the specification nor figures support the application of the mask value then feeding the mask value to the data protection function.

Claim Rejections - 35 USC § 102

The term "data protection" is not well defined in applicant's disclosure; therefore the examiner has chosen data protection to include access control. From the perspective of a network administrator, implementing a firewall through an access control specification is a form of data protection (data flowing on an intranet is protected from the internet).

Claims 1-5,10,12-18,20-23,25,26,28-31,33,34,36-43,45,46,48-52,54,55,57,58 are

rejected under 35 U.S.C. 102(e) as being anticipated by Bechtolsheim et al., US

6,377,577.

The applied reference has a common assignee with the instant application.

Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art

under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome

either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in

the reference was derived from the inventor of this application and is thus not the

invention "by another," or by an appropriate showing under 37 CFR 1.131.

In regards to claim 1, Bechtolsheim discloses a method comprising:

generating an index by a content-addressable memory based on an input value

in figure 2 element 231;

acquiring a mask value and a data protection field based on the index in figure 2

element 212;

generating a comparison value based on the mask value and the input value in

column 4 lines 38-43; and

comparing the comparison value to the data protection field in column 4 lines 43-

45.

In regards to claim 2, Bechtolsheim discloses the data protection field includes a

pre-computed data protection result in column 5 lines 33-35.

In regards to claim 3, Bechtolsheim discloses the content-addressable memory includes a ternary content-addressable memory in column 2 lines 51-54.

In regards to claim 4, Bechtolsheim discloses said acquiring the mask value and the data protection field includes a lookup operation on a memory, in figure 2 mask and data protection fields are stored in the CAM, which is accessed by a lookup operation of the memory.

In regards to claim 5, Bechtolsheim discloses generating the comparison value includes:

masking the input value with the mask value to generate a masked input value in column 4 lines 36-40; and

applying a data protection function to the masked input value to generate the comparison value in column 4 lines 64-65 and column 5 lines 1-9.

In regards to claim 10, Bechtolsheim discloses further comprising signaling an error condition if the comparison value is not equal to the data protection field in column 4 lines 57-60.

In regards to claim 12, Bechtolsheim discloses a computer-readable medium containing computer-readable instructions for performing a set of steps, the set of steps comprising:

retrieving a mask value and a data protection field from a storage based on an index value generated by a content-addressable memory based on an input value in figure 2 element 210 and 231;

masking the input value with the mask value to generate a masked input value in column 4 lines 38-40;

performing a data protection function on the masked input value to generate a comparison result in column 5 lines 1-9; and

comparing the comparison result with the data protection field in column 5 lines 5-7.

In regards to claim 13, Bechtolsheim discloses the storage includes one or more memory devices in figure 2 element 210.

In regards to claim 14, Bechtolsheim discloses the storage includes one or more storage devices in figure 2 element 210.

In regards to claim 15, Bechtolsheim discloses the content-addressable memory includes a ternary content-addressable memory in column 2 lines 51-54.

In regards to claim 16, Bechtolsheim discloses the data protection field includes a pre-computed data protection result in column 5 lines 33-35.

In regards to claim 17, Bechtolsheim discloses further indicating an error condition if the comparison value is not equal to the data protection field in column 4 lines 57-60.

In regards to claim 18, Bechtolsheim discloses an apparatus comprising:

a content-addressable memory configured to receive an input word and to generate an index in figure 2 element 232;

one or more storage mechanisms coupled to the content-addressable memory to receive the index and to produce a mask value and a data protection field in figure 2 element 210;

a masking device coupled to said one or more storage mechanisms to generate a masked result based on the input word and the mask value in column 4 lines 38-40;

a data protection generator coupled to the masking device to generate a comparison value based on the masked result in column 5 lines 1-9; and

a comparison mechanism coupled to the data protection generator and said one or more storage mechanisms to compare the comparison value and the data protection field in column 5 lines 5-7.

In regards to claim 20, Bechtolsheim discloses the comparison mechanism indicates an error condition if the comparison value is not equal to the data protection field in column 4 lines 57-60.

In regards to claim 21, Bechtolsheim discloses the data protection field includes a pre-computed data protection result in column 5 lines 33-35.

In regards to claim 22, Bechtolsheim discloses the content-addressable memory includes a ternary content-addressable memory in column 2 lines 51-54.

In regards to claim 23, Bechtolsheim discloses an apparatus comprising:

a content-addressable memory including a plurality of entries, each of the plurality of entries including a value and a data protection field in figure 2 element 210 (here the mask is being interpreted as the claimed value);

a data protection generator, coupled to the content-addressable memory, to receive said value of an identified one of the plurality of entries and to generate a comparison value in column 5 line 1-10; and

a comparison mechanism, coupled to the data protection generator and the content-addressable memory to compare the comparison value and said data protection field of the identified one of the plurality of entries in column 5 lines 5-8.

In regards to claim 25, Bechtolsheim discloses for each of the plurality of entries, said data protection field of a particular entry includes a pre-computed data protection result for said value of the particular entry in column 5 lines 33-35.

In regards to claim 26, Bechtolsheim discloses a method comprising:

receiving a content-addressable memory index in figure 2 element 231;

extracting a value field and a data protection field from the content-addressable memory index in figure 2 element 210 (here the mask is being interpreted as the claimed value);

performing a data protection function on the value to generate a comparison result, and comparing the comparison result with the data protection field in column 5 lines 1-10.

In regards to claim 28, Bechtolsheim discloses the data protection field includes a pre-computed data protection result in column 5 lines 33-35.

In regards to claim 29, Bechtolsheim discloses indicating an error condition if the comparison result is not equal to the data protection field in column 4 lines 57-60.

In regards to claim 30, Bechtolsheim discloses a computer-readable medium containing computer executable instructions for performing the method of claim 26 in column 5 lines 3-4.

In regards to claim 31, Bechtolsheim discloses an apparatus comprising:

a content-addressable memory to receive an input and to generate an index in figure 2 element 232;

a memory, coupled to the content-addressable memory and a comparison mechanism, to receive the index and to generate a data protection field in figure 2 element 210;

a data protection generator, coupled to the content-addressable memory and the comparison mechanism, to receive the index and to generate a comparison value in column 5 lines 1-10; and

the comparison mechanism to compare the comparison value and the data protection field in column 5 lines 5-7.

In regards to claim 33, Bechtolsheim discloses a method comprising:

generating an index by a content-addressable memory based on an input value in figure 2 element 231;

generating a comparison value based on the index in figure 2 element 212;

acquiring a data protection field based on the index in figure 2 element 211; and

comparing the comparison value to the data protection field in column 4 lines 40-47.

In regards to claim 34, Bechtolsheim discloses the data protection field includes a pre-computed data protection result in column 5 lines 33-35.

In regards to claim 36, Bechtolsheim discloses said acquiring the data protection field includes a lookup operation on a memory, in figure 2 mask and data protection fields are stored in the CAM, which is accessed by a lookup operation of the memory.

In regards to claim 37, Bechtolsheim discloses generating the comparison value includes applying a data protection function to the index in column 5 lines 1-10.

In regards to claim 38, Bechtolsheim discloses comprising signaling an error condition if the comparison value is not equal to the data protection field in column 4 lines 57-60.

In regards to claim 39, Bechtolsheim discloses an apparatus comprising:

means for generating an index by a content-addressable memory based on an input value in figure 2 elements 232 and 231;

means for acquiring a mask value and a data protection field based on the index in figure 2 element 211 and 213;

means for generating a comparison value based on the mask value and the input value in column 4 lines 38-40; and

means for comparing the comparison value to the data protection field in column
4 lines 40-42.

In regards to claim 40, Bechtolsheim discloses the data protection field includes
a pre-computed data protection result in column 5 lines 33-35.

In regards to claim 41, Bechtolsheim discloses the content-addressable memory
includes a ternary content-addressable memory in column 2 lines 51-54.

In regards to claim 42, Bechtolsheim discloses said means for acquiring the
mask value and the data protection field includes means for performing a lookup
operation on a memory, in figure 2 mask and data protection fields are stored in the
CAM, which is accessed by a lookup operation of the memory.

In regards to claim 43, Bechtolsheim discloses said means for generating the
comparison value includes:

means for masking the input value with the mask value to generate a masked
input value in column 4 lines 38-40; and

means for applying a data protection function to the masked input value to
generate the comparison value in column 5 lines 1-10.

In regards to claim 45, Bechtolsheim discloses further comprising means for signaling an error condition if the comparison value is not equal to the data protection field in column 4 lines 57-60.

In regards to claim 46, Bechtolsheim discloses an apparatus comprising:

means for receiving an input word and for generating an index in figure 2 elements 200, 230, 232 and 231;

means for receiving the index and for producing a mask value and a data protection field in figure 2 element 201, 211;

means for generating a masked result based on the input word and the mask value in column 4 lines 38-40;

means for generating a comparison value based on the masked result in column 4 lines 38-40; and

means for comparing the comparison value and the data protection field in column 4 lines 40-42.

In regards to claim 48, Bechtolsheim discloses said means for comparing includes means for indicating an error condition if the comparison value is not equal to the data protection field in column 4 lines 57-60.

In regards to claim 49, Bechtolsheim discloses the data protection field includes a pre-computed data protection result in column 5 lines 33-35.

In regards to claim 50, Bechtolsheim discloses said means for receiving the input word and for generating the index includes a content-addressable memory in figure 2 element 230.

In regards to claim 51, Bechtolsheim discloses said means for receiving the input word and for generating the index includes a ternary content-addressable memory in column 2 lines 51-54.

In regards to claim 52, Bechtolsheim discloses an apparatus comprising:

means for receiving an index and for producing a value and a data protection field in figure 2 elements 201, 212 and 213;

means for generating a comparison value based on the value in column 4 lines 38-40; and

means for comparing the comparison value to the data protection field in column 4 lines 40-42.

In regards to claim 54, Bechtolsheim discloses the data protection field includes a pre-computed data protection result for the value in column 5 lines 33-35.

In regards to claim 55, Bechtolsheim discloses an apparatus comprising:

means for generating an index based on an input value in figure 2 elements 200,

232, 230 and 231;

means for generating a comparison value based on the index in column 4 lines

38-40;

means for acquiring a data protection field based on the index in figure 2 element

213; and

means for comparing the comparison value to the data protection field in column

4 lines 40-42.

In regards to claim 57, Bechtolsheim discloses said means for acquiring the data

protection field includes means for performing lookup operation on a memory in figure 2

mask and data protection fields are stored in the CAM, which is accessed by a lookup

operation of the memory.

In regards to claim 58, Bechtolsheim discloses further means for signaling an

error condition if the comparison value is not equal to the data protection field in column

4 lines 57-60.

Claim Rejections - 35 USC § 103

Claims 6,11,19, 44, 49 are rejected under 35 U.S.C. 103(a) as being obvious

over Bechtolsheim et al., US 6,377,577 in view of Baumann, US Patent 6,732,227.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(l)(1) and § 706.02(l)(2).

In regards to claim 6, Bechtolsheim discloses generating the comparison value includes:

masking the input value with the mask value to generate a masked input value; and

applying a data protection function to the masked input value to generate the

comparison value in column 4 lines 36-44.

Bechtolsheim does not disclose decoding the mask value to generate a decoded

mask value.

Baumann discloses decoding the mask value to generate a decoded mask value

in figure 5 element 502. It is clear through examination of figure 5 and 9 that a 4 bit

value is used to generate a 72 bit mask. Therefore it would have been clear to one of

ordinary skill in the art at the time of invention to use an encoded mask to reduce

storage requirements and the number of interface lines.

In regards to claim 19, Bechtolsheim does not disclose the masking device

includes a decoder to decode the mask value. Baumann discloses decoding the mask

value to generate a decoded mask value in figure 5 element 502. It is clear through

examination of figure 5 and 9 that a 4 bit value is used to generate a 72 bit mask.

Therefore it would have been clear to one of ordinary skill in the art at the time of

invention to use an encoded mask to reduce storage requirements and the number of

interface lines.

In regards to claim 44, Bechtolsheim discloses said means for generating the

comparison value includes:

means for masking the input value with the decoded mask value to generate a

masked input value; and

means for applying a data protection function to the masked input value to generate the comparison value in column 4 lines 36-44.

Bechtolsheim does not disclose means for decoding the mask value to generate a decoded mask value.

Baumann discloses decoding the mask value to generate a decoded mask value in figure 5 element 502. It is clear through examination of figure 5 and 9 that a 4 bit value is used to generate a 72 bit mask. Therefore it would have been clear to one of ordinary skill in the art at the time of invention to use an encoded mask to reduce storage requirements and the number of interface lines.

In regards to claim 47, Bechtolsheim does not disclose said means for generating a masked result includes means for decoding the mask value. Baumann discloses decoding the mask value to generate a decoded mask value in figure 5 element 502. It is clear through examination of figure 5 and 9 that a 4 bit value is used to generate a 72 bit mask. Therefore it would have been clear to one of ordinary skill in the art at the time of invention to use an encoded mask to reduce storage requirements and the number of interface lines.

Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being obvious over Bechtolsheim et al., US 6,377,577.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art

only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome

by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in

the reference was derived from the inventor of this application and is thus not an

invention "by another"; (2) a showing of a date of invention for the claimed subject

matter of the application which corresponds to subject matter disclosed but not claimed

in the reference, prior to the effective U.S. filing date of the reference under 37 CFR

1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and

reference are currently owned by the same party and that the inventor named in the

application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer

in accordance with 37 CFR 1.321(c). For applications filed on or after November 29,

1999, this rejection might also be overcome by showing that the subject matter of the

reference and the claimed invention were, at the time the invention was made, owned

by the same person or subject to an obligation of assignment to the same person. See

MPEP § 706.02(l)(1) and § 706.02(l)(2).

In regards to claim 8, Bechtolsheim discloses the input value has a plurality of

input value bits in figure 2 element 231, and the content-addressable memory includes

a plurality of pairs of masks and values in figure 2 elements 212 and 213 with each

mask each having a plurality of mask bits and each value having a plurality of value bits

in column 4 lines 38-40; and

wherein said generating the index includes matching the input value with a particular one of the plurality of pairs of masks and values, wherein said matching includes comparing said input value bits in column 4 lines 38-40.

Bechtolsheim does not disclose said mask bits of the particular one of the plurality of pairs have a scalar value of one with said value bits of the particular one of the plurality of pairs whose corresponding said mask bits of the particular one of the plurality of pairs have a scalar value of one.

It is well known in the art the use of active high and active low values when communicating digital information. Likewise, masking information can be stored in an active high (a logic value of 1 indicates the bit is not masked) or active low (a logic value of 0 indicates the bit is not masked). A masking operation in an active high scenario is performed by [(value) AND (mask)]. A masking operation in an active low scenario is performed by [NOT(value) NOR (mask)]. Therefore it would have been obvious to one of ordinary skill in the art to compare input value bits whose corresponding mask bits have a scalar value of one.

In regards to claim 9, Bechtolsheim discloses the input value has a plurality of input value bits in figure 2 element 231, and the content-addressable memory includes a plurality of pairs of masks and values in figure 2 elements 212 and 213 with each mask each having a plurality of mask bits and each value having a plurality of value bits in column 4 lines 38-40; and

wherein said generating the index includes matching the input value with a particular one of the plurality of pairs of masks and values, wherein said matching includes comparing said input value bits in column 4 lines 38-40.

Bechtolsheim does not disclose said mask bits of the particular one of the plurality of pairs have a scalar value of zero with said value bits of the particular one of the plurality of pairs whose corresponding said mask bits of the particular one of the plurality of pairs have a scalar value of zero.

It is well known in the art the use of active high and active low values when communicating digital information. Likewise, masking information can be stored in an active high (a logic value of 1 indicates the bit is not masked) or active low (a logic value of 0 indicates the bit is not masked). A masking operation in an active high scenario is performed by [(value) AND (mask)]. A masking operation in an active low scenario is performed by [NOT(value) NOR (mask)]. Therefore it would have been obvious to one of ordinary skill in the art to compare input value bits whose corresponding mask bits have a scalar value of zero.

Claims 24,27,32,35,53,56 are rejected under 35 U.S.C. 103(a) as being obvious over Bechtolsheim et al., US 6,377,577 in view of McAuley et al. "Fast Routing Table Lookup Using CAMs".

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome

by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in

the reference was derived from the inventor of this application and is thus not an

invention "by another"; (2) a showing of a date of invention for the claimed subject

matter of the application which corresponds to subject matter disclosed but not claimed

in the reference, prior to the effective U.S. filing date of the reference under 37 CFR

1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and

reference are currently owned by the same party and that the inventor named in the

application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer

in accordance with 37 CFR 1.321(c). For applications filed on or after November 29,

1999, this rejection might also be overcome by showing that the subject matter of the

reference and the claimed invention were, at the time the invention was made, owned

by the same person or subject to an obligation of assignment to the same person. See

MPEP § 706.02(l)(1) and § 706.02(l)(2).

In regards to claims 24, 27, 32, 35, 53, 56, Bechtolsheim does not disclose the

content-addressable memory includes a binary content-addressable memory. McAuley

states that both binary and ternary are effective in their use in network routing tables.

McAuley illustrates the differences between the two options by stating the ternary CAM

has a tri-state where the third state indicates that the specified bit is not to be used in

table lookups, effectively providing an embedded mask with each entry. In situations

when the routing table has a high degree of hierarchy (for instance an entry exists for

the .edu domain, the vt.edu domain, and the eng.vt.edu), and more specifically many

top and second level domains are defined, a ternary CAM is a cost effective solution. But if it can be shown that most table entries are for lower level domains, then a binary CAM is the most effective solution since a ternary CAM is twice the cost of a binary CAM for the same size CAM. Therefore it would have been obvious to one of ordinary skill in the art to use a binary CAM in Bechtolsheim's disclosed invention.

Allowable Subject Matter

Claim 11 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul A Baker whose telephone number is (571)272-24203. The examiner can normally be reached on M-F 10am-6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mano Padmanabhan can be reached on (571)272-4210. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

PB

MANO PADMANABHAN
SUPERVISORY PATENT EXAMINER